



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBW7839-2G-1
Job Sheet 186433



Part No: RBW7839-2G-1

Job Qty: 3 ea

Part Name: Quill



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/15/18

Job Tracking No:

Due Date: 12/7/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBW7839-2G Rev 5 IPP Rev A 18.02.13 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	3 Ea	12/7/18	12/7/18	0.00	0.00	Start Up Machining-4		JR-18-12-12
120	Mori Seiki	3 pcs	12/7/18	12/7/18	0.00	3.00	MORI SL-154		JB 18-12-12
130	QC	3 pcs	12/7/18	12/7/18	0.00	0.00	QC2 Machining-5		JB 18-12-12
140	QC	3 pcs	12/7/18	12/7/18	0.00	0.00	QC8 Machining-5		JB 18-12-12
170	Outsource	3 pcs	12/7/18	12/7/18			ATG001-VC Groupe 8		18-12-17
180	Packaging	3 pcs	12/7/18	12/7/18	0.00	0.00	Packaging2		DEC 19 2018
190	QC	3 pcs	12/7/18	12/7/18	0.00	0.00	QC6		61
200	Packaging	3 pcs	12/7/18	12/7/18	0.00	0.00	Packaging3-2		21
210	QC21-SA	3 Ea	12/7/18	12/7/18	0.00	0.00	QC21		21

Part Op 120 - 1-Machine as per folio FB905 FOLIO REV: _____ DWG REV: _____ 2-Debur
Descriptions: 130 - Engrave T/N and/or P/N number using Marktronic engraver as per DWG.
170 - Issue P/O to ATG : PO 042057 -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required
180 - Receive
200 - Identify and Stock

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6R1.125	6061 Round Bar 1.125	.7320 ft (.244 ea)	90-Start up Operation	5123405

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M6061T6R1.125	1	43	0

Locations

not be found.

Plex 11/15/18 11:19 AM Dart.lajeunesse.marie



Container No: S136978



Part: RBW7839-2G-1

Job No: 186433

Serial No/Batch: S136978

Revision: 5

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

QA: _____ Date: _____



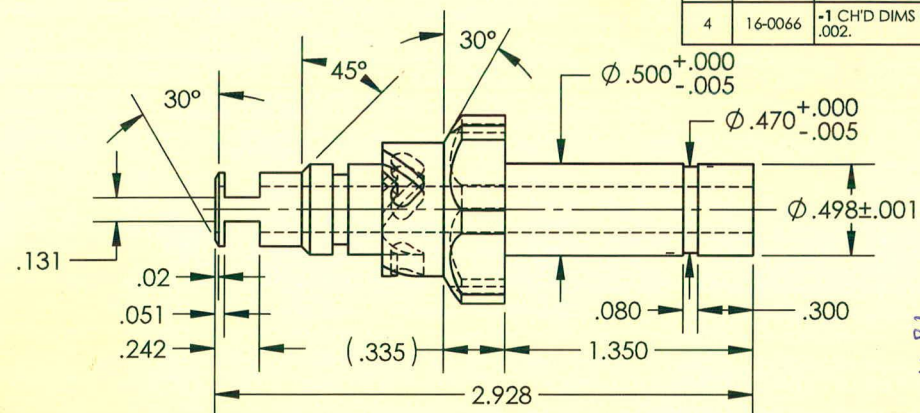
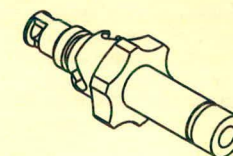
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

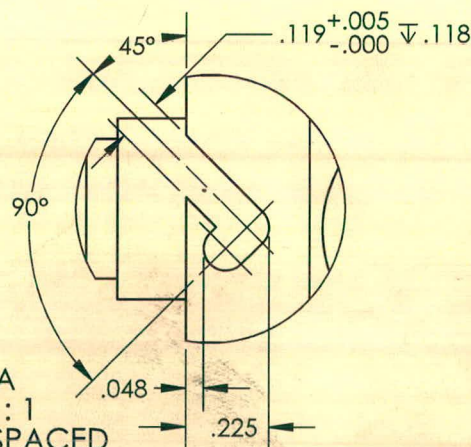
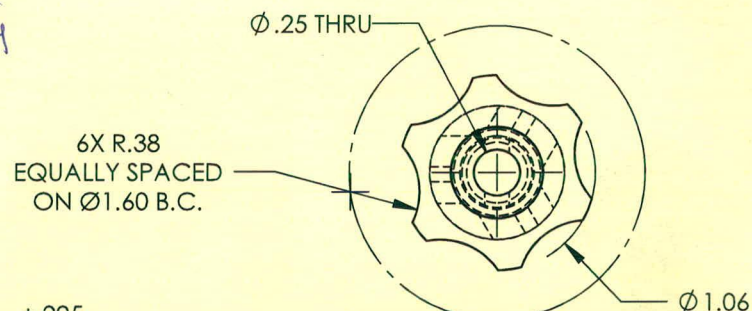
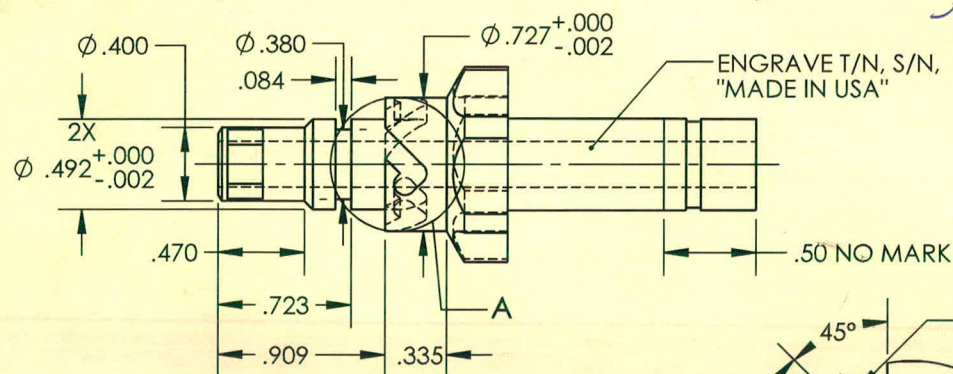
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		CH'D TITLEBLOCK & REV BLOCK, CH'D T/N FROM RBW7839, CH'D INK STAMP NOTE, -1 CH'D ANGLE OF GROOVE PER G.E.	8/20/2009	RJC	RW
1A		CH'D TOOL NAME FROM MAIN GEAR BOX DRAIN TOOL PER E.B.	11/28/2011	RJC	RW
2		MODIFIED -1 TO WORK WITH COUPLING, ADDED COUPLING, TUBE, AND CAPS, DELETED CRIMP HOSE CLAMP AND LABEL. CH'D HOSE FROM Ø5/8 TO Ø1/2.	7/27/2012	JAG	SE
3		-1 CH'D O.D. PROFILE WAS (8XR.165) IS (6X R.375), SLOT DIM WAS .119 IS .119 +.005/-0.00.	2/26/2013	BIM	GE
3A		-9 CH'D DIM WAS 3.78 IS 3.68. -13 CH'D MATERIAL TO NEW PIG CORP. #PAD210. -1 CH'D DIM WAS .020 IS .02. WAS Ø.250 THRU IS Ø.25 THRU. DELETED 6X .106. .082. CH'D NOTE WAS 6X R.375 EQUALLY SPACED IS 6X R.38 EQUALLY SPACED ON Ø1.60 B.C.	2/5/2014	DPD	RW
4	16-0066	-1 CH'D DIMS WAS Ø.729 +.000-.002 IS Ø.727 +.000-.002, WAS 2X Ø.494 +.000-.002 IS 2X Ø.492 +.000-.002.	6/30/2016	RJC	SM



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 180433 MJS
18-11-17



① -1
QUILL

DETAIL A
SCALE 2:1
3X EQUALLY SPACED



TITLE IGB & TGB OIL DRAIN TOOL

DWG NO. RBW7839-2G-1

R	
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MAT'L	6061
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HEAT TREAT	
FINISH	RED ANODIZE

SPEC	MIL-A-8625F, TYPE II, CLASS II
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DRAWN BY:	PERRITT
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CHECKED:	DUERFELD DT
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CHECKED:	DUERFEL
OPBS APPR:	ANDERS

OPPS APPR:	ANDERSON
CA APPR:	LINDSAY

QA APPR:	LINDSAY
APPROVED:	LINDSAY

APPROVED:	MACKOVJAK
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SCALE 1:1

	UNLESS OTHERWISE SPECIFIED	
	DIMENSIONS ARE IN INCHES	
.XXX ± .005	FRACTIONS ± 1/8	
.XX ± .01	ANGLES ± .5°	
.X ± .1	SURFACES = 125/	

1. BREAK ALL SHARP EDGES
.015 x 45° OR .015R

2. DIMENSIONAL LIMITS APPLY
AFTER PLATING

3. INTERPRET DIM AND TOL PER
ASME Y14.5M-2009

USED ON MODEL

AW139

DATE	11/12/2008
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SHEET 2 OF 3

DART AEROSPACE LTD		Work Order: 186433
Description: IGB and TGB oil drain tool		Part Number: RBW7839-2G-1
Inspection Dwg: RBW7839-2G-1	Rev: 5	Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø 1.06	+/- .010	1.062	✓		Vernier	JB-05
Ø .25 thru	+/- .010	.251	✓		Vernier	JB-05
Ø .500	+ .000 - .005	.498	✓		Mic	VHJ-02
Ø .470	+ .000 - .005	.468	✓		Vernier	JB-05
Ø .498	+/- .001	.4982	✓		Mic	VHJ-02
2.928	+/- .005	2.9295	✓		Vernier	JB-05
1.350	+/- .005	1.351	✓		Vernier	JB-05
.300	+/- .005	.300	✓		Vernier	JB-05
.080	+/- .005	.080	✓		Vernier	JB-05
(.335)	+/- .005	.335	✓		Vernier	JB-05
.242	+/- .005	.244	✓		Vernier	JB-05
.051	+/- .005	.051	✓		Vernier	JB-05
.02	+/- .010	.022	✓		Vernier	JB-05
.131	+/- .005	.1305	✓		Vernier	JB-05
30°	+/- .5°	30°	✓		optical	comp
30°	+/- .5°	30°	✓		optical	comp
45°	+/- .5°	45°	✓		optical	comp
Ø .727	+ .000 - .002	.7255	✓		Mic	VHJ-02
Ø .380	+/- .005	.3805	✓		Vernier	JB-05
Ø .400	+/- .005	.3996	✓		Mic	VHJ-02
Ø .492	+ .000 - .002	.4908	✓		Mic	VHJ-02
.084	+/- .005	.084	✓		Vernier	JB-05
.470	+/- .005	.4705	✓		Vernier	JB-05
.723	+/- .005	.723	✓		Vernier	JB-05
.909	+/- .005	.908	✓		Vernier	JB-05
.335	+/- .005	.3355	✓		Vernier	JB-05
50 No Mark	+/- .010	.500	✓		Vernier	JB-05
.119	+ .005 - .008	.122	✓		Vernier	JB-05
↓ .118	+/- .005	.116	✓		Vernier	JB-05
.225	+/- .005	.225	✓		Vernier	JB-05
.048	+/- .005	.052	✓		Vernier	JB-05
90°	+/- .5°	90°	✓		optical	comp
45°	+/- .5°	45°	✓		optical	comp
Measured by: JB	Checked by: DAS	QC Inspector: 20				
Date: 18-12-12	Date: 18-12-17	Date:				

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	

12

SAO
SS
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F. 1

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO042057**

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO042057
PO Date: 12/17/18
Due Date: 12/21/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Tsimiklis, ChrisoulaPhone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pynt Terms: Net 60

Freight Terms:
Special Comments:

revised
-cls qty. signed
PO behind.

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	187448	RBH9928-2	Trim Tab Bender -Issue P/O : PO ***ENSURE TO SHIP BOTH PARTS*** -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required	Firmed	-	12/21/18	10 pcs	0 pcs	10 pcs	\$9.25/pcs	\$92.50
2	184749	RB DB3188L-5	Drain Hose Adapter -Issue P/O : PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required	Firmed	-	12/21/18	7 pcs	0 pcs	7 pcs	\$1.25/pcs	\$8.75
3	186433	RBW7839-2G-1	Quill -Issue P/O : PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required	Firmed	-	12/21/18	8 pcs	0 pcs	8 pcs	\$1.25/pcs	\$10.00



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PURCHASE ORDER **PO042057**

Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4	185789	RB DB3188L-1	Drain Hose Adapter -Issue P/O to ATG : PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required	Firmed	-	12/21/18	9 pcs	0 pcs	9 pcs	\$1.25/pcs	\$11.25
						9 X DEC 19 2018					
5	185158	RB T101740	Tail Rotor Blade Rigging Tool -Issue P/O to GROUPE ALTECH: PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Certificate of Conformity is required	Firmed	-	12/21/18	5 pcs	0 pcs	5 pcs	\$16.25/pcs	\$81.25
						5 X DEC 19 2018					
Grand Total:											\$203.75

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 12/19/18 9:56 AM dart.tsimiklis.chrisoula



Certificat de Conformité / Certificate of Compliance

(015441-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

015441 - 1

Livré à / Ship to

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.				
19-Dec-2018		Aman			042057				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ N° Qty	Qté Scrap/	À venir/ Back Order	
1	RBH9928-2 Rev.	RBH9928-2 01-ANO-RED [ANODIZE RED] MIL-A-8625 TYPE 2 CLASS 2	ANODIZE CH	10	10	0	0	0	
2	RBDB3188L-5 Rev.	RBDB3188L-5 01-ANO-RED [ANODIZE RED] MIL-A-8625 TYPE 2 CLASS 2	ANODIZE CH	7	7	0	0	0	
3	RBW7839-2G-1 Rev.	RBW7839-2G-1 01-ANO-RED [ANODIZE RED] MIL-A-8625 TYPE 2 CLASS 2	ANODIZE CH	8	8	0	0	0	
4	RBDB3188L-1 Rev.	RBDB3188L-1 01-ANO-RED [ANODIZE RED] MIL-A-8625 TYPE 2 CLASS 2	ANODIZE CH	9	9	0	0	0	
5	RBT101740 Rev.	RBT101740 01-ANO-RED [ANODIZE RED] MIL-A-8625 TYPE 2 CLASS 2	ANODIZE CH	5	5	0	0	0	

DAS
61
9-89

**DAS
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Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness
Inspecteur Qualité
Quality Inspector
Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.

